## INDEX TO VOLUME XLIX.


ACETONE bodies, blood, after the injection of small amounts of adrenalin chloride, 385

—— —— in blood, determination of, 375

—— —— —— —— urine, determination of, 357

Acid, butyric, oxidation of, with hydrogen peroxide, catalytic effect of ammonia on, 123

—— excretion and inorganic phosphate in the postabsorptive period, 171

——, hippuric, synthesis and benzoate administration on liver function, 229

——, β-hydroxybutyric, note on the determination, 351

——, nitrous, on casein, action of, 327

Acids, experimental administration of, *via* the stomach and peripheral vein, ammonia excretion following, 411

——, influence upon the carbon dioxide-combining power of the blood plasma, 479

Adrenalin chloride, blood acetone bodies after the injection of small amounts of, 385

Alanine and glycine, influence of the ingestion of, and of meat, upon the carbon dioxide-combining power of blood plasma, 485

Alfalfa plant, proteins of, 63

Alkaline tide after meals, observations on, 163

Amino sugar of Chinese edible birds' nests, isolation and nature, 441

Ammonia, catalytic effect of, on the oxidation of butyric acid with hydrogen peroxide, 123

—— excretion following experimental administration of acids *via* the stomach and peripheral vein, 441

Antiketogenesis, 143

Apparatus, Van Slyke blood gas, a mechanical shaker and other devices for use with, 43

BENZOATE administration and hippuric acid synthesis on liver function, 229

Beri-beri, uncomplicated, lesions in the bones of rats suffering from, 399

Birds' nests, Chinese edible, composition of, and the nature of their proteins, 429

—— ——, —— ——, isolation and nature of the amino sugar of, 441

BLATHERWICK, N. R. Observations on blood fat in diabetes, 193

Blood acetone bodies after the injection of small amounts of adrenalin chloride, 385

——, chloride content of the, and its volume per cent of cells, relation between, 263

——, determination of acetone bodies in, 375

——, —— —— the gases of, 1

—— fat in diabetes, observations on, 193

——, the fate of sulfides in the, 519

Blood gas apparatus, Van Slyke, a mechanical shaker and other devices for use with, 43
—— of new-born calves, an effect of the ingestion of colostrum upon the composition of, 115
—— plasma, carbon dioxide-combining power of, influence of the ingestion of meat and of glycine and alanine upon, 485
—— —— and corpuscles, calcium content of, in the new-born, 187
—— ——, influence of acids upon the carbon dioxide-combining power of, 479
—— and plasma, a new method for the determination of the fibrin percentage in, 279
——, proteins in, determination by a micro method, 109
——, —— ——, use of sodium sulfate as the globulin precipitant in the determination, 93
——, sulfates in, 311
——, whole, plasma, and serum by direct precipitation, micro determination of calcium in, 487
Bloor, W. R. Lipemia, 201
Blunt, Katharine, Nelson, Alta, and Oleson, Harriet Curry. The basal metabolism of underweight children, 247
Buffer solution for colorimetric comparison, 183
Butyric acid, oxidation of, with hydrogen peroxide, catalytic effect of ammonia on, 123

Cajori, F. A. Some nutritive properties of nuts. II. The pecan nut as a source of adequate protein, 389
Calcium content of blood plasma and corpuscles in the new-born, 187
—— in whole blood, plasma, and serum by direct precipitation, micro determination, 487
Calorimetry, animal, 453, 479, 485
Carbon dioxide-combining power of the blood plasma, influence of acids upon, 479
—— —— —— —— blood plasma, influence of the ingestion of meat and of glycine and alanine upon, 485
Casein, action of nitrous acid on, 327
——, a comparative study of the hydrolysis of, and deaminized casein by proteolytic enzymes, 343
——, deaminized by proteolytic enzymes, and a comparative study of the hydrolysis of casein, 343
Catalytic effect of ammonia on the oxidation of butyric acid with hydrogen peroxide, 123
Cells, volume per cent in blood, and chloride content of the blood, relation between, 263
Chanutin, Alfred. Animal calorimetry. Twentieth paper. The influence of the ingestion of meat and of glycine and alanine upon the carbon dioxide-combining power of blood plasma, 485
Chemical composition of the ovaries of the fresh water gar, *Lepidosteus*, 47
—— —— —— —— skeletal muscle of the fresh water gar, *Lepidosteus*, 57
Chloride, adrenalin, blood acetone bodies after the injection of small amounts of, 385
—— content of the blood and its volume per cent of cells, relation between, 263
Clark, Guy W. The micro determination of calcium in whole blood, plasma, and serum by direct precipitation, 487

COLLIP, J. B. A further study of the respiratory processes in *Mya arenaria* and other marine mollusca, 297
Colorimetric comparison, a buffer solution for, 183
Colostrum, an effect of the ingestion of, upon the composition of the blood of new-born calves, 115
Corpuscles and blood plasma, calcium content of, in the new-born, 187
Creatine formation in a case of progressive pseudohypertrophic muscular dystrophy, some observations on, 319

DEAMINIZED casein by proteolytic enzymes, and a comparative study of the hydrolysis of casein, 343
DELPRAT, G. D., and WHIPPLE, G. H. Studies on liver function. Benzoate administration and hippuric acid synthesis, 229
DENIS, W. Sulfates in blood, 311
Determination, micro, of calcium in whole blood, plasma, and serum by direct precipitation, 487
—— of the acetone bodies in blood, 375
—— —— —— —— bodies in urine, 357
—— —— —— fibrin percentage in blood and plasma, a new method for, 279
—— —— —— gases of the blood, 1
—— —— β-hydroxybutyric acid, note on, 351
—— —— proteins in blood by a micro method, 109
—— —— —— —— blood, use of sodium sulfate as the globulin precipitant in, 93
Diabetes, observations on blood fat in, 193
DUNN, MAX S., and LEWIS, HOWARD B. The action of nitrous acid on casein, 327
—— and ——. A comparative study of the hydrolysis of casein and deaminized casein by proteolytic enzymes, 343
Dystrophy, progressive pseudohypertrophic muscular, some observations on creatine formation in a case of, 319

ENZYMES, proteolytic, a comparative study of the hydrolysis of casein and deaminized casein by, 343
Excretion, acid, and inorganic phosphate in the postabsorptive period, 171
——, ammonia, following experimental administration of acids *via* the stomach and peripheral vein, 411

FAT, blood, in diabetes, observations on, 193
Fibrin percentage in blood and plasma, a new method for the determination, 279
FISKE, CYRUS H. Inorganic phosphate and acid excretion in the postabsorptive period, 171
——. Observations on the "alkaline tide" after meals. I, 163
FLEMING, WILLIAM D. Vitamine content of rice by the yeast method. Organic nitrogen as a possible factor in stimulation of yeast, 119

GAR, fresh water, *Lepidosteus*, chemical composition of the ovaries of, 47
——, —— ——, ——, chemical composition of the skeletal muscle of, 57

Gas apparatus, Van Slyke blood, a mechanical shaker and other devices for use with, 43
Gases of the blood, determination, 1
GIBSON, R. B., and MARTIN, FRANCES T. Some observations on creatine formation in a case of progressive pseudohypertrophic muscular dystrophy, 319
Globulin precipitant in the determination of proteins in blood, use of sodium sulfate as, 93
Glycine and alanine, influence of the ingestion of, and of meat, upon the carbon dioxide-combining power of blood plasma, 485
GRAM, H. C. A new method for the determination of the fibrin percentage in blood and plasma, 279
——. See NORGAARD and GRAM, 263
GREENE, CHARLES W., and NELSON, ERWIN E. The chemical composition of the skeletal muscle of the fresh water gar, *Lepidosteus*, 57
——. See NELSON and GREENE, 47

HAGGARD, HOWARD W. The fate of sulfides in the blood, 519
Heat production, behavior of various intermediary metabolites upon, 453
Hippuric acid synthesis and benzoate administration on liver function, 229
HOWE, PAUL E. The determination of proteins in the blood—A micro method, 109
——. An effect of the ingestion of colostrum upon the composition of the blood of new-born calves, 115
HOWE, PAUL E. The use of sodium sulfate as the globulin precipitant in the determination of proteins in blood, 93
HUBBARD, ROGER S. Determination of the acetone bodies in blood, 375
——. Determination of the acetone bodies in urine, 357
——. Note on the determination of β-hydroxybutyric acid, 351
—— and WRIGHT, FLOYD R. Blood acetone bodies after the injection of small amounts of adrenalin chloride, 385
Hydrogen peroxide, catalytic effect of ammonia on the oxidation of butyric acid with, 123
Hydrolysis of casein, comparative study, and deaminized casein by proteolytic enzymes, 343
β-Hydroxybutyric acid, note on the determination, 351

INGESTION of colostrum upon the composition of the blood of new-born calves, an effect, 115
—— —— meat and of glycine and alanine, influence upon the carbon dioxide-combining power of blood plasma, 485
Injection of small amounts of adrenalin chloride, blood acetone bodies after, 385
Inorganic phosphate and acid excretion in the postabsorptive period, 171

JONES, MARTHA R. The calcium content of plasma and corpuscles in the new-born, 187

KEETON, ROBERT W Ammonia excretion following experimental administration of acids *via* the stomach and peripheral vein, 411

Ketogenic balance from the respiratory quotient, calculation, 143

LEAVENWORTH, CHARLES S. See OSBORNE, WAKEMAN, and LEAVENWORTH, 63

*Lepidosteus*, fresh water gar, chemical composition of the ovaries, 47

——, —— —— ——, chemical composition of the skeletal muscle, 57

Lesions in the bones of rats suffering from uncomplicated beri-beri, 399

LEWIS, HOWARD B. See DUNN and LEWIS, 327, 343

Lipemia, 201

Liver function, studies of, 229

LUSK, GRAHAM. Animal calorimetry. Eighteenth paper. The behavior of various intermediary metabolites upon the heat production. 453

MARTIN, FRANCES T. See GIBSON and MARTIN, 319

MCCOLLUM, E. V. See SHIPLEY, MCCOLLUM, and SIMMONDS, 399

MCILVAINE, T. C. A buffer solution for colorimetric comparison, 183

Mechanical shaker and other devices for use with the Van Slyke blood gas apparatus, 43

Metabolism, basal, of underweight children, 247

Metabolites, behavior of various intermediary, upon the heat production, 453

Method, micro, for the determination of proteins in blood, 109

——, new, for the determination of the fibrin percentage in blood and plasma, 279

——, yeast, vitamine content of rice by, 119

Mollusca, *Mya arenaria* and other marine, a further study of the respiratory processes in, 297

Muscle, skeletal, of the fresh water gar, *Lepidosteus*, chemical composition, 57

Muscular dystrophy, progressive pseudohypertrophic, some observations on creatine formation in a case of, 319

*Mya arenaria* and other marine mollusca, a further study of the respiratory processes in, 297

NELSON, ALTA. See BLUNT, NELSON, and OLESON, 247

NELSON, ERWIN E., and GREENE, CHARLES W. The chemical composition of the ovaries of fresh water gar, *Lepidosteus*, 47

——. See GREENE and NELSON, 57

Nitrogen, organic, as a possible factor in the stimulation of yeast, 119

Nitrous acid on casein, action of, 327

NORGAARD, A., and GRAM, H. C. Relation between the chloride content of the blood and its volume per cent of cells, 263

Nut, pecan, as a source of adequate protein, 389

Nutritive properties of nuts, some, 389

Nuts, some nutritive properties of, 389

OLESON, HARRIET CURRY. See BLUNT, NELSON, and OLESON, 247

Organic nitrogen as a possible factor in the stimulation of yeast, 119

OSBORNE, THOMAS B., WAKEMAN, ALFRED J., and LEAVENWORTH, CHARLES S. The proteins of the alfalfa plant, 63

Ovaries of the fresh water gar, *Lepidosteus*, chemical composition, 47
Oxidation of butyric acid with hydrogen peroxide, catalytic effect of ammonia on, 123

PECAN nut as a source of adequate protein, 389
Peripheral vein and stomach, ammonia excretion following experimental administration of acids *via*, 411
Peroxide, hydrogen, catalytic effect of ammonia on the oxidation of butyric acid with, 123
Phosphate, inorganic, and acid excretion in the postabsorptive period, 171
Plant, alfalfa, proteins of, 63
Plasma, blood, carbon dioxide-combining power of, influence of the ingestion of meat and of glycine and alanine upon, 485
——, ——, and corpuscles, calcium content of, in the new-born, 187
——, ——, influence of acids upon the carbon dioxide-combining power of, 479
—— and blood, a new method for the determination of the fibrin percentage in, 279
——, serum, and whole blood by direct precipitation, micro determination of calcium in, 487
Postabsorptive period, inorganic phosphate and acid excretion in, 171
Precipitant, globulin, use of sodium sulfate as, in the determination of proteins in blood, 93
Precipitation, direct, micro determination of calcium in whole blood, plasma, and serum by, 487
Protein, adequate, pecan nut as a source, 389
Proteins in blood, determination by a micro method, 109
—— —— ——, use of sodium sulfate as the globulin precipitant in the determination, 93
——, nature of Chinese edible birds' nests, and their composition, 429
—— of the alfalfa plant, 63
Proteolytic enzymes, a comparative study of the hydrolysis of casein and deaminized casein by, 343

RESPIRATORY processes in *Mya arenaria* and other marine mollusca, a further study, 297
—— quotient, calculation of the ketogenic balance from, 143
Rice, vitamine content of, by the yeast method, 119
Rickets, experimental, studies on, 399

SERUM, whole blood, and plasma by direct precipitation, micro determination of calcium in, 487
SHAFFER, PHILIP A. Antiketogenesis. III. Calculation of the ketogenic balance from the respiratory quotient, 143
SHIPLEY, P. G., MCCOLLUM, E. V., and SIMMONDS, NINA. Studies on experimental rickets. IX. Lesions in the bones of rats suffering from uncomplicated beri-beri, 399
SIMMONDS, NINA. See SHIPLEY, MCCOLLUM, and SIMMONDS, 399
Skeletal muscle of the fresh water gar, *Lepidosteus*, chemical composition, 57
Sodium sulfate, use of, as the globulin precipitant in the determination of proteins in blood, 93

STADIE, WILLIAM C. A mechanical shaker and other devices for use with the Van Slyke blood gas apparatus, 43
——. See VAN SLYKE and STADIE, 1
Stomach and peripheral vein, ammonia excretion following experimental administration of acids *via*, 411
Sugar, amino, of Chinese edible birds' nests, isolation and nature, 441
Sulfate, sodium, use of, as the globulin precipitant in the determination of proteins in blood, 93
Sulfates in blood, 311
Sulfides in the blood, the fate, 519

TAISTRA, SOPHIA A. Animal calorimetry. Nineteenth paper. The influence of acids upon the carbon dioxide-combining power of the blood plasma, 479

URINE, determination of acetone bodies in, 357

VAN SLYKE blood gas apparatus, a mechanical shaker and other devices for use with, 43
VAN SLYKE, DONALD D., and STADIE, WILLIAM C. The determination of the gases of the blood, 1
Vein, peripheral, and stomach, ammonia excretion following experimental administration of acids *via*, 411
Vitamine content of rice by the yeast method, 119

WAKEMAN, ALFRED J. See OSBORNE, WAKEMAN, and LEAVENWORTH, 63
WANG, CHI CHE. The composition of Chinese edible birds' nests and the nature of their proteins, 429
——. The isolation and the nature of the amino sugar of Chinese edible birds' nests, 441
WHIPPLE, G. H. See DELPRAT and WHIPPLE, 229
WITZEMANN, EDGAR J. The catalytic effect of ammonia on the oxidation of butyric acid with hydrogen peroxide, 123
WRIGHT, FLOYD R. See HUBBARD and WRIGHT, 385

YEAST method, vitamine content of rice by, 119
——, organic nitrogen as a possible factor in the stimulation, 119